**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A process for tetramerisation of olefins comprising contacting an olefinic feedstream with a catalyst system which includes the combination of

a transition metal compound;

a heteroatomic ligand described by the following general formula

$$(R)_nA\text{-}B\text{-}C(R)_m$$

wherein

A and C are independently an atom selected from the group consisting of phosphorus, arsenic, antimony, oxygen, bismuth, sulphur, selenium and nitrogen or said atom oxidized by S, Se, N or O, where the valance of A and/or C allows for such oxidation;

B is a linking group between A and C;

the R groups are the same or different, and each R is independently selected from the group consisting of a hydrocarbyl group, a hetero hydrocarbyl group, a substituted hydrocarbyl group, and a substituted hetero hydrocarbyl group;

n and m for each R is independently determined by the respective valence and oxidation state of A and C; and

provided that when the heteroatomic ligand is described by the following general formula

$$(R^1)(R^2)A\text{-}B\text{-}C(R^3)(R^4)$$

wherein

A and C are independently selected from the group consisting of phosphorus, arsenic, antimony, bismuth and nitrogen;

B is a linking group between A and C; and

each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of a hydrocarbyl group, a hetero hydrocarbyl group, a substituted hydrocarbyl group, and a substituted hetero hydrocarbyl group,

any substituents that may be part of one or more of $R^1$, $R^2$, $R^3$ and $R^4$ are non electron donating and where $R^1$, $R^2$, $R^3$ and $R^4$ are independently aromatic, including hetero aromatic groups, not all the groups $R^1$, $R^2$, $R^3$ and $R^4$ have a substituent on the atom adjacent to the atom bound to A or C; and

an activator selected from the group consisting of organoaluminium compounds, organoboron compounds, organic salts, inorganic acids and salts, wherein the organoaluminium compounds are selected from the group of compounds of the formula $AlR_3$, where each [[$R_3$]] R is independently a $C_1$-$C_{12}$ alkyl or a halide, aluminoxanes and modified aluminoxanes.

2. (Original) The process as claimed in claim 1, wherein the olefinic feedstream includes an α-olefin and the product stream includes at least 30% of a tetramerised α-olefin monomer.

3. (Previously presented) The process as claimed in claim 1, wherein the olefinic feedstream includes ethylene and the product stream includes at least 30% 1-octene.

4. (Previously presented) The process as claimed in claim 1, wherein the olefinic feedstream includes ethylene and wherein $(C_6 + C_8) : (C_4 + C_{10})$ ratio in the product stream is more than 2.5:1.

5. (Previously presented) The process as claimed in claim 3, wherein ethylene is contacted with the catalyst system at a pressure of more than 1000 kPa (10 barg).

6. (Previously presented) The process as claimed in claim 1, wherein the heteroatomic ligand is described by the following general formula $(R^1)(R^2)A\text{-}B\text{-}C(R^3)(R^4)$; wherein A and C are independently selected from the group consisting of phosphorus, arsenic, antimony, bismuth and nitrogen; B is a linking group between A and C; and each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of a hydrocarbyl group, a hetero hydrocarbyl group, a substituted hydrocarbyl group, and a substituted hetero hydrocarbyl group.

7. (Previously presented) The process as claimed in claim 6, wherein the heteroatomic ligand is described by the following general formula $(R^1)(R^2)A\text{-}B\text{-}C(R^3)(R^4)$; wherein A and C are independently selected from the group comprising of phosphorous, arsenic, antimony, bismuth and nitrogen; B is a linking group between A and C; and each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of a non-aromatic hydrocarbyl group, a non-aromatic heterohydrocarbyl group, an aromatic hydrocarbyl group, an aromatic heterohydrocarbyl group and a hetero aromatic heterohydrocarbyl group.

8. (Previously presented) The process as claimed in claim 6, wherein each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently an aromatic group, including a hetero aromatic group

and not all the groups $R^1$, $R^2$, $R^3$ and $R^4$ have a substituent on the atom adjacent to the atom bound to A or C.

9. (Previously presented) The process as claimed in claim 1, wherein each non electron donating substituent is non polar.

10. (Currently amended) The process as claimed in claim 1, wherein B is selected from the group consisting of: an organic linking group comprising a hydrocarbylene, a substituted hydrocarbylene, a heterohydrocarbylene, or a substituted heterohydrocarbylene; an inorganic linking group comprising a single atom linking spacer; and a group comprising methylene, dimethylmethylene, 1,2-ethylene, 1,2-phenylene, 1,2-propylene, 1,2-catecholate, $-(CH_3)N-N(CH_3)-$, $-B(R^5)-$, $-Si(R^5)_2$, $-P(R^5)-$ or $-N(R^5)-$, wherein $R^5$ is hydrogen, a hydrocarbyl or a substituted hydrocarbyl, a substituted heteroatom or a halogen.

11. (Original) The process as claimed in claim 10, wherein B is a single atom linking spacer.

12. (Original) The process as claimed in claim 10, wherein B is $-N(R^5)-$, wherein $R^5$ is selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, aryloxy, substituted aryloxy, halogen, nitro, alkoxycarbonyl, carbonyloxy, alkoxy, aminocarbonyl, carbonylamino, dialkylamino, a silyl group or a derivative thereof, and an aryl group substituted with any of these substituents.

13. (Previously presented) The process as claimed claim 1, wherein A and/or C is independently oxidised by S, Se, N or O, where the valence of A and/or C allows for such oxidation.

14. (Previously presented) The process as claimed in claim 1, wherein each of A and C is phosphorus.

15. (Original) The process as claimed in claim 12, wherein each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of benzyl, phenyl, tolyl, xylyl, mesityl, biphenyl, naphthyl, anthracenyl, dimethylamino, diethylamino, methylethylamino, thiophenyl, pyridyl, thioethyl, thiophenoxy, trimethylsilyl, dimethylhydrazyl, methyl, ethyl, ethenyl, propyl, butyl, propenyl, propynyl, cyclopentyl, cyclohexyl, ferrocenyl and tetrahydrofuranyl group.

16. (Original) The process as claimed in claim 15, wherein each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of a phenyl, tolyl, biphenyl, naphthyl, thiophenyl and ethyl group.

17. (Currently amended) The process as claimed in claim 1, wherein the ligand is selected from the group consisting of

$(phenyl)_2PN(methyl)P(phenyl)_2$, $(phenyl)_2PN(pentyl)P(phenyl)_2$,

$(phenyl)_2PN(phenyl)P(phenyl)_2$, $(phenyl)_2PN(p\text{-methoxyphenyl})P(phenyl)_2$,

$(phenyl)_2\text{-}PN(p\text{-}^t\text{butylphenyl})P(phenyl)_2$, $(phenyl)_2PN((CH_2)_3\text{-N-morpholine})P(phenyl)_2$,

$(phenyl)_2PN(Si(CH_3)_3)P(phenyl)_2$, $\cancel{(((phenyl)_2P)_2NCH_2CH_2)N,}$

$\underline{(((phenyl)_2P)_2NCH_2CH_2)_3N,}$ $(ethyl)_2PN(methyl)P(ethyl)_2$,

$(ethyl)_2PN(isopropyl)P(phenyl)_2$, $(ethyl)(phenyl)PN(methyl)P(ethyl)(phenyl)$,

$(ethyl)(phenyl)PN(isopropyl)P(phenyl)_2$,

$(phenyl)_2P(=Se)N(isopropyl)P(phenyl)_2$,$(phenyl)_2PCH_2CH_2P(phenyl)_2$,

$(o\text{-ethylphenyl})(phenyl)PN(isopropyl)P(phenyl)_2$,

$(o\text{-methylphenyl})_2PN(isopropyl)P(o\text{-methylphenyl})(phenyl)$,

$(phenyl)_2PN(benzyl)P(phenyl)_2$, $(phenyl)_2PN(1\text{-cyclohexyl-ethyl})P(phenyl)_2$,

$(phenyl)_2PN[CH_2CH_2CH_2Si(OMe_3)]P(phenyl)_2$,

$(phenyl)_2PN(cyclohexyl)P(phenyl)_2$, $(phenyl)_2PN(2\text{-methylcyclohexyl})P(phenyl)_2$,

$(phenyl)_2PN(allyl)P(phenyl)_2$, $(2\text{-naphthyl})_2PN(methyl)P(_2\text{-naphthyl})_2$,$(p\text{-biphenyl})_2$-PN(methyl)$P(p\text{-biphenyl})_2$,

$(p\text{-methylphenyl})_2PN(methyl)P(p\text{-methylphenyl})_2$,

~~$(2\text{-thiopheneyl})_2PN(methyl)P(2\text{-thiopheneyl})_2$~~

$\underline{(2\text{-thiophenyl})_2PN(methyl)P(2\text{-thiophenyl})_2}$,

$(phenyl)_2PN(methyl)N(methyl)P(phenyl)_2$,

$(m\text{-methylphenyl})_2PN(methyl)P(m\text{-methylphenyl})_2$,

~~$(phenyl_2PN(isopropyl)P(phenyl)_2$~~ $\underline{(phenyl)_2PN(isopropyl)P(phenyl)_2}$, and

$(phenyl)_2P(=S)N(isopropyl)P(phenyl)_2$.

18. (Previously presented) The process as claimed in claim 1, wherein the catalyst system is prepared by combining in any order the heteroatomic ligand, the transition metal compound and the activator.

19. (Previously presented) The process as claimed in claim 1, wherein the catalyst system is a pre-formed coordination complex prepared by combining the heteroatomic ligand and the transition metal compound and wherein the pre-formed coordination complex is added to the olefinic feedstream and the activator.

20. (Previously presented) The process as claimed in claim 1, wherein the transition metal in the transition metal compound is selected from the group consisting of chromium, molybdenum, tungsten, titanium, tantalum, vanadium and zirconium.

21. (Original) The process as claimed in claim 20, wherein the transition metal is chromium.

22. (Previously presented) The process as claimed in claim 1, wherein the transition metal compound is selected from the group consisting of an inorganic salt, an organic salt, a co-ordination complex and organometallic complex.

23. (Original) The process as claimed in claim 22, wherein the transition metal compound is selected from the group consisting of chromium trichloride tris-tetrahydrofuran complex, (benzene)tricarbonyl chromium, chromium (III) octanoate, chromium (III) acetylacetonoate, chromium hexacarbonyl and chromium (III) 2-ethylhexanoate.

24. (Original) The process as claimed in claim 23, wherein the transition metal is a complex selected from chromium (III) acetylacetonoate and chromium (III) 2-ethylhexanoate.

25. (Previously presented) The process as claimed in claim 1, wherein the transition metal compound and the heteroatomic ligand are combined to provide a transition metal/ligand ratio from about 0.01:100 to 10 000:1.

26-27. (Cancelled).

28. (Previously presented) The process as claimed in claim 1, wherein the activator is an alkylaluminoxane and the transition metal and the aluminoxane are combined in proportions to provide an Al/transition metal ratio from about 1:1 to 10 000:1.

29. (Currently amended) A catalyst system which includes the combination of

a transition metal compound; and

a heteroatomic ligand described by the following general formula

$$(R^1)(R^2)A\text{-}B\text{-}C(R^3)(R^4)$$

wherein

A and C are independently an atom selected from the group consisting of phosphorus, arsenic, antimony, oxygen, bismuth, sulphur, selenium and nitrogen or said atom oxidized by S, Se, N or O, where the valance of A and/or C allows for such oxidation;

B is a linking group between A and C;

the R groups are the same or different, and each R is independently selected from the group consisting of a hydrocarbyl group, a heterohydrocarbyl group, a substituted hydrocarbyl group, and a substituted heterohydrocarbyl group; and

provided that when

A and C are independently selected from the group consisting of phosphorus, arsenic, antimony, bismuth and nitrogen;

B is a linking group between A and C <u>and is selected from the group consisting of a hydrocarbylene, a substituted hydrocarbylene, an inorganic linking group comprising a single atom linking spacer and -$(CH_3)N\text{-}N(CH_3)$-, -$B(R^5)$-, -$Si(R^5)_2$, - $P(R^5)$- and -$N(R^5)$-, where $R^5$ is hydrogen, a hydrocarbyl or substituted hydrocarbyl, a substituted heteroatom or a halogen</u>; and

each of $R^1$, $R^2$ $R^3$ and $R^4$ is independently selected from the group consisting of a hydrocarbyl group, a heterohydrocarbyl group, a substituted hydrocarbyl group, and a substituted heterohydrocarbyl group,

any substituents that may be part of one or more of $R^1$, $R^2$, $R^3$ and $R^4$ are non electron donating and where $R^1$, $R^2$, $R^3$ and $R^4$ are independently aromatic, including hetero aromatic groups, not all the groups $R^1$, $R^2$, $R^3$ and $R^4$ have a substituent on the atom adjacent to the atom bound to A or C.

30-32. (Cancelled)

33. (Currently amended) The catalyst system of claim [[32]]29, wherein B is -N($R^5$)-, wherein $R^5$ is selected from the group consisting of hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, aryloxy, substituted aryloxy, halogen, nitro, alkoxycarbonyl, carbonyloxy, alkoxy, aminocarbonyl, carbonylamino, dialkylamino, a silyl group or a derivative thereof, and an aryl group substituted with any of these substituents.

34. (Previously presented) The catalyst system of claim 29, wherein each of A and C is independently phosphorus .

35. (Previously presented) The catalyst system of claim 29, wherein each of $R^1$, $R^2$, $R^3$ and $R^4$ is independently selected from the group consisting of benzyl, phenyl, tolyl, xylyl, mesityl, biphenyl, naphthyl, anthracenyl, dimethylamino, diethylamino, methylethylamino, thiophenyl, pyridyl, thioethyl, thiophenoxy, trimethylsilyl, dimethylhydrazyl, methyl, ethyl, ethenyl, propyl, butyl, propenyl, propynyl, cyclopentyl, cyclohexyl, ferrocenyl and tetrahydrofuranyl group.

36. (Previously presented) The catalyst system of claim 35, wherein each of $R^1$, $R^2$, $R^3$ and $R^4$ are independently selected from the group consisting of a phenyl, tolyl, biphenyl, naphthyl, thiophenyl and ethyl group.

37. (Currently amended) The catalyst system of claim 29, wherein the ligand is selected from the group consisting of

(phenyl)$_2$PN(methyl)P(phenyl)$_2$, (phenyl)$_2$PN(pentyl)P(phenyl)$_2$, (phenyl)$_2$PN(phenyl)P(phenyl)$_2$, (phenyl)$_2$PN(*p*-methoxyphenyl)P(phenyl)$_2$, (phenyl)$_2$-PN(*p*-$^t$butylphenyl)P(phenyl)$_2$, (phenyl)$_2$PN((CH$_2$)$_3$-N-morpholine)P(phenyl)$_2$, (phenyl)$_2$PN(Si(CH$_3$)$_3$)P(phenyl)$_2$, (((phenyl)$_2$P)$_2$NCH$_2$CH$_2$)$_3$N, (ethyl)$_2$PN(methyl)P(ethyl)$_2$, (ethyl)$_2$PN(isopropyl)P(phenyl)$_2$, (ethyl)(phenyl)PN(methyl)P(ethyl)(phenyl), (ethyl)(phenyl)PN(isopropyl)P(phenyl)$_2$, (phenyl)$_2$P(=Se)N(isopropyl)P(phenyl)$_2$,(phenyl)$_2$PCH$_2$CH$_2$P(phenyl)$_2$, (o-ethylphenyl)(phenyl)PN(isopropyl)P(phenyl)$_2$, (o-methylphenyl)$_2$PN(isopropyl)P(o-methylphenyl)(phenyl), (phenyl)$_2$PN(benzyl)P(phenyl)$_2$, (phenyl)$_2$PN(1-cyclohexyl-ethyl)P(phenyl)$_2$, (phenyl)$_2$PN[CH$_2$CH$_2$CH$_2$Si(OMe$_3$)]P(phenyl)$_2$, (phenyl)$_2$PN(cyclohexyl)P(phenyl)$_2$, (phenyl)$_2$PN(2-methylcyclohexyl)P(phenyl)$_2$, (phenyl)$_2$PN(allyl)P(phenyl)$_2$, (2-naphthyl)$_2$PN(methyl)P($_2$-naphthyl)$_2$,(p-biphenyl)$_2$-PN(methyl)P(p-biphenyl)$_2$, (*p*-methylphenyl)$_2$PN(methyl)P(*p*-methylphenyl)$_2$, (2-thiophenyl)$_2$PN(methyl)P(2-thiophenyl)$_2$, (phenyl)$_2$PN(methyl)N(methyl)P(phenyl)$_2$, (*m*-methylphenyl)$_2$PN(methyl)P(*m*-methylphenyl)$_2$, ~~(phenyl$_2$PN(isopropyl)P(phenyl)$_2$~~ (phenyl)$_2$PN(isopropyl)P(phenyl)$_2$, and (phenyl)$_2$P(=S)N(isopropyl)P(phenyl)$_2$.

38. (Previously presented) The catalyst system of claim 29, wherein the transition metal in the transition metal compound is selected from any one of the group

consisting of chromium, molybdenum, tungsten, titanium, tantalum, vanadium and zirconium.

39. (Original) The catalyst system of claim 38, wherein the transition metal is chromium.

40. (Previously presented) The catalyst system of claim 29, wherein the transition metal compound is selected from the group consisting of an inorganic salt, organic salt, a co-ordination complex and organometallic complex.

41. (Previously presented) The catalyst system of claim 40, wherein ~~wherein~~ the transition metal compound is selected from the group consisting of chromium trichloride tris-tetrahydrofuran complex, (benzene)tricarbonyl chromium, chromium (III) octanoate, chromium (III) acetylacetonoate, chromium hexacarbonyl and chromium (III) 2-ethylhexanoate.

42. (Previously presented) The catalyst system of claim 29, wherein the transition metal from the transition metal compound and the heteroatomic ligand are combined to provide a transition metal/ligand ratio from about 0.01:100 to 10 000:1.

43. (Previously presented) The catalyst system of claim 29, which further includes an activator.

44. (Previously presented) The catalyst system of claim 43, wherein the activator is an alkylaluminoxane.

45. (Previously presented) The catalyst system of claim 44, wherein the transition metal and the aluminoxane are combined in proportions to provide an Al/transition metal ratio from about 1:1 to 10 000:1.

46-47 (Cancelled).